

REMARKSINTRODUCTION:

In accordance with the foregoing, claims 42, 49, 50, 52, 53 and 55 have been amended to correct apparent typographical errors and have not been amended to narrow the scope of the claim as would have been understood by one of ordinary skill in the art. FIGs. 1-5 have been amended to include a Prior Art label as indicated

No new matter is being presented, and approval and entry of the foregoing amendments are respectfully requested.

Claims 1-18 and 42-64 are pending and under consideration. Reconsideration is requested.

REJECTION UNDER 35 U.S.C. §102:

In the Office Action at pages 2-3, the Examiner rejects claims 51, 52, 62, and 63 under 35 U.S.C. §102(e) in view of Uzawa et al. (U.S. Patent No. 6,333,786). This rejection is respectfully traversed and reconsideration is requested.

Among other features, the Examiner asserts that col. 8, lines 26-42 of Uzawa et al. teaches "a second step of detecting at least one of a plurality of second measurement marks provided associated with a shot area different from the predetermined shot area, before detecting all of the first measurement marks" as recited in claim 51. By way of review, Uzawa et al. discloses a method in which preparatory sample shot areas SS1, SS3, SS5, and SS7 shown in FIG. 3A are selected to detect positional deviation. Each of the preparatory sample shot areas has wafer marks WMR and WML as shown in FIG. 3B. (Col. 4, lines 45-66). As shown in FIG. 4, for each preparatory sample shot area SS1, SS3, SS5, or SS7, the wafer marks WMR and WML are imaged by the image pickup device CM and interpreted in the X and Y direction as WMRx, WMLx, WMRy and WMLy. However, during the imaging and interpretation of these interpreted wafer marks WMRx, WMLx, WMRy and WMLy for one of the preparatory sample shot area SS1, SS3, SS5, and SS7, there is no suggestion that another of the preparatory sample shot areas SS1, SS3, SS5, and SS7 is imaged. Moreover, there is no disclosure that the imaged another preparatory sample shot has a wafer mark which is interpreted between the interpretation of the wafer marks WMR and WML for the one preparatory sample shot area.

Specifically, col. 8, lines 26-42 of Uzawa et al. is drawn to a pattern superposition used with respect to each WMRx, WMLx, WMRy and WMLy. As shown in FIG. 5(a), a deviation Dlx

is found for the interpreted wafer mark WMLx of FIG. 4 using a number of windows Wk and integrated waveforms Sk(x) for each of the windows Wk of the interpreted wafer mark WMLx. These integrated waveforms Sk(x) are compared against templates as shown in FIGs. 6(a) through 6(c) in order to determine the average positional deviation Dlx for the interpreted wafer mark WMLx. (Col. 7, lines 1-30, col. 7, line 58 to col. 8, line 57). Subsequently, the positional deviations are similarly determined between the reticle mark RMLy and the interpreted wafer mark WMLy, between the reticle mark RMRx and the interpreted wafer mark WMRx, and between the reticle mark RM Ry and the interpreted wafer mark WM Ry. (Col. 8, lines 57-67). However, since the interpreted wafer marks WMLx, WMLy, WMRx, and WM Ry relate to the wafer marks WML and WMR for one of the predetermined sample shot areas SS1, SS3, SS5, or SS7, there is no suggestion that, between detecting the deviations of one of the interpreted wafer marks WMLx, WMLy, WMRx, and WM Ry or between detecting WML or WMR for the one predetermined sample shot area, an additional of the preparatory sample shot areas is imaged so as to provide another wafer mark from the additional preparatory sample shot area.

In contrast, claim 51 recites, among other features, “a first step of detecting at least one of a plurality of *first measurement marks provided associated with a predetermined shot area out of the shot areas*,” and “a second step of detecting at least *one of a plurality of second measurement marks provided associated with a shot area different from the predetermined shot area, before detecting all of the first measurement marks*.” As such, it is respectfully submitted that Uzawa et al. does not disclose the invention recited in claim 51.

For similar reasons, it is respectfully submitted that Uzawa et al. does not suggest the invention recited in claim 62.

In addition, the Examiner asserts that col. 10, lines 20-39 of Uzawa et al. teaches “a third step of detecting one or more remaining first measurement marks which are not detected in said first step, after said second step” as recited in claim 52. However, while col. 10, lines 20-39 of Uzawa et al. suggests additional computations used with respect to magnification errors and rotational errors for each of the sample shot areas, there is no suggestion that this operation utilizes previously-undetected wafer marks from the sample shot areas SS1, SS3, SS5, and SS7. As such, in addition to its depending from claim 51, it is respectfully submitted that claim 52 is deemed patentable over Uzawa et al. due at least to Uzawa et al. not disclosing “a third step of detecting one or more remaining first measurement marks *which are not detected in said first step, after said second step*” as recited in claim 52.

For similar reasons, it is respectfully submitted that Uzawa et al. does not disclose the invention recited in claim 63.

STATUS OF CLAIMS NOT REJECTED:

On pages 3-4, the Examiner allows claims 1-18, 42-50, 53-61, and 64.

CONCLUSION:

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. And further, it is respectfully submitted that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.

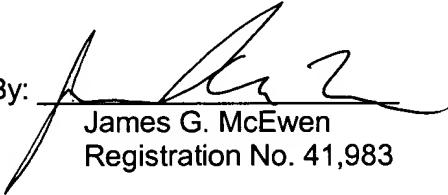
If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such issues.

If there are any additional fees associated with the filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

By:


James G. McEwen
Registration No. 41,983

1201 New York Avenue, NW, Suite 700
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501

Date: July 28, 2003